WHAT IS CLAIMED IS:

1. A tool holder comprising a plurality of portions arranged in end-to-end relationship and interconnected by friction weld to form a unitary assembly subjected to a heat treatment; the portions formed of different respective materials having at least one of: different mass properties and different chemical compositions; a front-most one of the portions constituting a cutter head portion, and a rear-most one of the portions constituting a mounting portion.

2. The tool holder according to claim 1 wherein the rear portion is finished.

3. The tool holder according to claim 2 wherein the front portion is unfinished.

4. The tool holder according to claim 1 wherein the plurality of portions comprises more than two portions.

5. The tool holder according to claim 4 wherein the plurality of portions consists of three portions.

6. The tool holder according to claim 5 wherein the three portions comprise a steel rear portion, a carbide front portion, and an aluminum intermediate portion.

7. The tool holder according to claim 1 wherein the plurality of portions consists of two portions.

8. The tool holder according to claim 6 wherein the front portion comprises steel 4340, and the rear portion comprises steel H13.

9. A tool holder comprising a rear mounting portion, a front cutter head portion, and an intermediate portion interconnecting the front and rear portions; the front, rear, and intermediate portions formed of different respective materials having different mass properties and/or different chemical compositions, and interconnected in end-to-end fashion along an axis by friction welds to form a unitary assembly.

10. The tool holder according to claim 9 wherein the front portion comprises steel, the intermediate portion comprises aluminum, and the rear portion comprises carbide.

11. The tool holder according to claim 10 wherein the unitary assembly is heat treated.

12. The tool holder according to claim 9 wherein the unitary assembly is heat treated.

13. The tool holder according to claim 9, wherein the cutter head portion is unfinished.

14. The tool holder according to claim 9 wherein the intermediate portion includes a hollow metal part and an anti-vibration material disposed inside the hollow part.

15. A method of producing a tool holder, comprising the steps of:

A) providing a plurality of portions comprised of respective materials having different mass properties and/or different chemical compositions;

B) placing the plurality of portions in end-to-end relationship along a center axis;

C) friction welding the plurality of portions together to form a unitary assembly, wherein a rear-most one of the portions constitutes a mounting portion and a front-most one of the portions constitutes a cutter head; and

D) heat treating the unitary assembly.

16. The method according to claim 15 wherein step A comprises providing more than two portions.

17. The method according to claim 15 wherein step A comprises providing only two portions.

18. The method according to claim 15 wherein the cutter head of step C is in the form of an unfinished blank, and further comprising the step of machining the cutter head portion to a desired shape subsequent to step D.

19. The method according to claim 15 wherein step D comprises austenitizing.

20. The method according to claim 15 wherein step D comprises tempering.